



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/620,764

07/17/2003

Kari Nicmela

089229.00098

9147

32294 7590 07/11/2007
SQUIRE, SANDERS & DEMPSEY L.L.P.
14TH FLOOR
8000 TOWERS CRESCENT
TYSONS CORNER, VA 22182

EXAMINER

NGUYEN, LEE

ART UNIT

PAPER NUMBER

2618

MAIL DATE

DELIVERY MODE

07/11/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/620,764	Applicant(s) NIEMELA, KARI	
	Examiner LEE NGUYEN	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-11,13-19 and 21-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2,5-7,10,13-15,18,21-23,25 and 26 is/are allowed.
- 6) ☒ Claim(s) 1,3,8-9,11,16-17,19,24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/27/07 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3, 8-9, 11, 16-17, 19 and 24 rejected under 35 U.S.C. 103(a) as being unpatentable over Chizhik et al. in view of Geier (US 5,525,998).

Regarding claims 1, 9 and 17, Chizhik teaches a method/means for compensating Doppler shift in a telecommunication system, where at least one user terminal 235 is moving in relation to a network element 230 (fig. 2), comprising: inherently measuring a

Art Unit: 2618

received uplink signal (calculating or receiving signals that have a similar Doppler shift, see abstract and para [0041]); estimating an amount of Doppler frequency compensation for at least one downlink signal related to a user terminal based upon a measured received uplink signal (Doppler compensatable, abstract, determining Doppler shift in para [0085]); and compensating a Doppler shift for at least one downlink signal related to the user terminal by shifting a frequency of the signal according to the estimated amount of Doppler frequency compensation (processing one or more of the Doppler-compensatable to compensate for the Doppler shift, see abstract and [0040], and Doppler pre-compensation in para [0084]). Chizhik fails to teach that the estimation of Doppler frequency compensation utilizes information on system geometry. Geier teaches that Doppler frequency compensation utilizes information on system geometry (col. 6, lines 24-35 and col. 7, lines 44-57). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Geier with Chizhik in order to satisfy the requirement of Doppler measurement since all Doppler error variances will not be equal.

Regarding claims 8, 16 and 24, the combination of Chizhik and Geier also teaches that the estimated amount of the Doppler frequency compensation is filtered or weighted (col. 6, lines 24-35 and col. 7, lines 44-57 of Geier). The motivation is the same as set forth in claims 1, 9 and 17.

Art Unit: 2618

Regarding claims 3, 11 and 19, Chizhik also teaches that the estimation takes into account the previously made Doppler effect compensation (see already determined in [0085]).

Allowable Subject Matter

4. Claims 2, 5-7, 10, 13-15, 18, 21-23, 25-26 are allowed.

Response to Arguments

Applicant's arguments filed 4/27/07 have been fully considered but they are not persuasive.

In the remarks, Applicant argues that:

Geier discloses an odometer assisted GPS navigation method, which is illustrated in, e.g., Fig. 2 of Geier. The figure illustrates a speed filter 30, Doppler compensation filter 40, heading filter 50, and position filter 60 which are configured to supplement GPS satellite signal data with direct odometer data for a moving vehicle. However, Applicant respectfully assert that it is improper to combine Chizhik and Geier to yield the claimed invention in the field of data transmission method and system, because Chizhik is directed to slowing the observed rate of channel fluctuations in a multiple antenna system, while Geier is merely directed to using odometer data to attempt to fill gaps in

Art Unit: 2618

GPS triangulation data. Therefore, a person skilled in the art in multiple antenna systems would not seek the teachings of an unrelated field of odometer-assisted GPS navigation system of Geier.

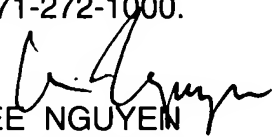
The examiner respectfully disagrees. As demonstrated above, Chizhik directs to Doppler compensation (abstract). Geier also involves Doppler compensation (col. 6, lines 25-47). Therefore, Geiner is pertinent to Chizhik.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEE NGUYEN whose telephone number is 571-272-7854. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ANDERSON D. MATTHEW can be reached on 571-272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2618

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



LEE NGUYEN
Primary Examiner
Art Unit 2618